## TABLE OF CONTENTS

LIST OF FIGURES	$\mathbf{V}$
LIST OF TABLES	V
ACRONYMS	VI
UNIT ABBREVIATIONS	VII
SUMMARY	VIII
1. INTRODUCTION	10
1.1 Purpose and Need for Action	10
1.2 Operational and Decommissioning History	15
1.3 Summary of Radiological Conditions at the BONUS Facility	19
2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	25
2.1 Proposed Action: Authorizing the Puerto Rico Electric Power Authority (PREPA) to allow public access to th BONUS reactor building with existing controls	e 25
<ul> <li>2.2 Reasonable Alternatives to the Proposed Action</li> <li>2.2.1 No-Action Alternative</li> <li>2.2.2 Authorizing PREPA to allow public access to the BONUS reactor building following additional decontamination</li> </ul>	25 25 25
2.3 Additional Alternatives Considered But Not Evaluated In Detail	26
3. DESCRIPTION OF THE AFFECTED ENVIRONMENT	27
3.1 BONUS Facility	27
3.2 Land Use	27
3.3 Climate and Topography	28
3.4 Earth Resources 3.4.1 Geology 3.4.2 Soils	28 28 29

3.5 Water Resources	31
3.5.1 Surface Water	31
3.5.2 Groundwater	31
3.5.3 Floodplains	31
3.5.4 Wetlands	32
3.6 Air Quality and Noise	32
3.6.1 Air Quality	32
3.6.2 Noise	32
3.7 Biological Resources	33
3.7.1 Vegetation	33
3.7.2 Wildlife	33
3.7.3 Threatened and Endangered Species	34
3.8 Cultural Resources	34
3.9 Social and Economic Conditions	34
3.9.1 Demography	34
3.9.2 Economic Activities	35
3.9.3 Environmental Justice	35
3.9.4 Transportation	35
3.10 Existing Radiological and Chemical Exposures	36
3.11 Accidents	36
4. EVALUATION OF POTENTIAL ENVIRONMENTAL CONSEQUENCES	37
4.1 Proposed Action: Authorizing PREPA to allow public access to the BONUS reactor building with exist	ting controls
	37
4.1.1 Demography & Socioeconomics	37
4.1.1.1 Environmental Justice	37
4.1.2 Land Use	38
4.1.3 Geology and Soils	38
4.1.4 Air Quality	38
4.1.5 Hydrology and Water Quality	38
4.1.6 Floodplain/Wetlands	38
4.1.7 Ecological Resources	39
4.1.7.1 Threatened or Endangered Species	39
4.1.8 Historical, Cultural and Archaeological Resources	39
4.1.9 Noise	40
4.1.10 Transportation	40
4.1.11 Human Health and Safety	40
4.1.11.1 Radiological Exposure	40
4.1.11.2 Occupational Safety and Health	42
4.1.11.3 Accidents	42
4.2 No-Action Alternative (No Authorization for Public Access)	43

4.2.1 Demography & Socioeconomics	43
4.2.1.1 Environmental Justice	44
4.2.2 Land Use	44
4.2.3 Geology and Soils	44
4.2.4 Air Quality	44
4.2.5 Hydrology and Water Quality	44
4.2.6 Floodplain/Wetlands	44
4.2.7 Ecological Resources	44
4.2.7.1 Threatened or Endangered Species	45
4.2.8 Historical, Cultural and Archaeological Resources	45
4.2.9 Noise	45
4.2.10 Transportation	45
4.2.11 Human Health and Safety	45
4.2.11.1 Radiological Exposure	45
4.2.11.2 Occupational Safety and Health	46
4.2.11.3 Accidents	46
4.2 Authorizing DDEDA to great public access to the PONIC	reactor building following additional decentamination//
<ul><li>4.3 Authorizing PREPA to grant public access to the BONUS</li><li>4.3.1 Demography &amp; Socioeconomics</li></ul>	reactor building following additional decontainmation40 47
4.3.1.1 Environmental Justice	47
4.3.2 Land Use	47
4.3.3 Geology and Soils	48
4.3.4 Air Quality	48
4.3.5 Hydrology and Water Quality	48
4.3.6 Floodplain/Wetlands	48
4.3.7 Ecological Resources	48
4.3.7.1 Threatened or Endangered Species	48
4.3.8 Historical, Cultural and Archaeological Resources	49
4.3.9 Noise	49
4.3.10 Transportation	49
4.3.11 Human Health and Safety	49
4.3.11.1 Radiological Exposure	49
4.3.11.2 Occupational Safety and Health	50
4.3.11.3 Accidents	50
4.4 Cumulative and Long-Term Impacts	51
5. AGENCIES & ORGANIZATIONS CONSUL	TED 54
6. REFERENCES	52

## **ATTACHMENT A: CONSULTATIONS**

## ATTACHMENT B: REVIEW COMMENTS AND DOE RESPONSES

## LIST OF FIGURES

Figure 1.a Map of Puerto Rico	11
Figure 1.b Location of the BONUS Facility	12
Figure 2. Photograph of the BONUS Reactor Building Site	13
Figure 3. BONUS Facility Floorplan.	14
LIST OF TABLES	
Table 1. Estimates of Principal Radionuclides Entombed in the BONUS Reactor	18
Table 2. Estimates of Principal Radionuclides in the BONUS Reactor Systems  External to the Entombment.	18
Table 3. BONUS Reactor Building Radiological Measurements	21